

Figure 1

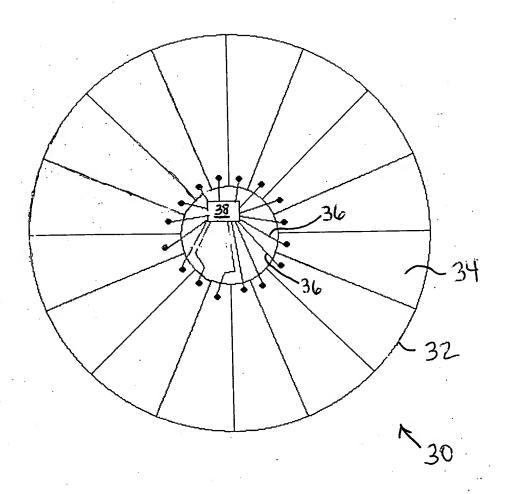


Figure 2

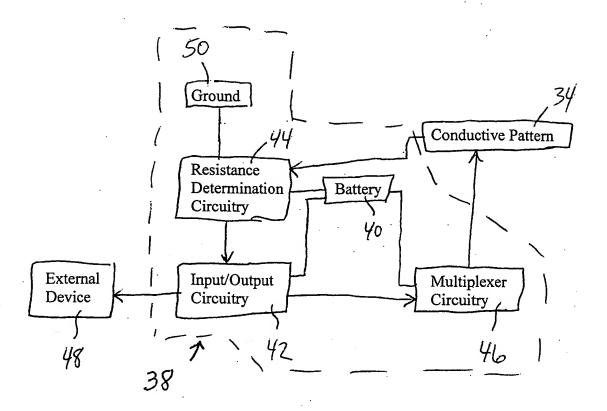
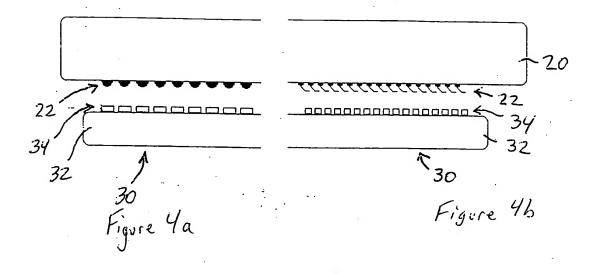


Figure 3



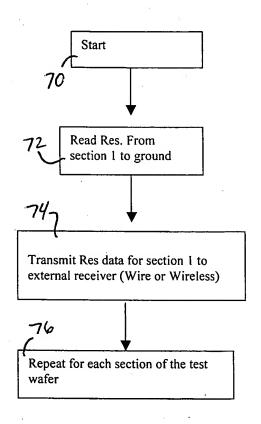


Figure 5

electrically contacting at least a portion of a conductive pattern on a substrate with electrical contacts of the contact ring

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having the device send test signals to
the conductive pattern, receive signals from
the conductive pattern, and measure the resistances
associated with the electrical contacts of the contact ring
(i.e., possibly including using a battery to power
resistance test circuitry on the device, using input/output
structure connected to the conductive pattern on the
substrate to initiate sending the test signals, using a
multiplexer connected to the conductive pattern on the
substrate to send the test signals to the conductive pattern
on the substrate in a pre-determined order, and using the
device to communicate signals to an external device)

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possibly removing the device from the contact ring, cleaning at least one of the electrical contacts of the contact ring, and using the device again to measure the resistances associated with the electrical contacts of the contact ring

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Figure 6